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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,349	12/15/2000	Pieter Vorenkamp	1875.1010001	3369

7590

07/31/2003

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EXAMINER

TRAN, TRANG U

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/739,349

Applicant(s)

VORENKAMP ET AL.

Examiner

Trang U. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-10 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Citta et al (US Patent No. 6,559,898 B1).

In considering claim 1, Citta et al. discloses all the claimed subject matter, note 1) the claimed a substrate is met by VSB digital television receiver 24 (Fig. 1, col. 3, line 43 to col. 4, line 62), 2) the claimed a receiver disposed on the substrate for converting a received signal to an IF signal is met by the tuner 26 (Fig. 1, col. 3, lines 43-50), 3) the claimed a digital IF demodulator disposed on the substrate and coupled to the receiver for converting the IF signal to a demodulated baseband signal is met by the IF demodulator 28 (Fig. 1, col. 3, lines 50-61), and 4) the claimed a transmitter disposed on the substrate operating in cooperation with the receiver to establish a two way communications path is met by the transport demultiplexer 32 (Fig. 1, col. 4, lines 4-25).

Claim 2 is rejected for the same reason as discussed in claim 1.

### ***Allowable Subject Matter***

3. Claims 3-10 are allowed.

Claim 3 is directed to an integrated digital IF demodulator which identifies the uniquely distinct features: “a VIF demodulator and Nyquist filter disposed on the substrate having an input coupled to the output of the AGC peak detection circuit; a second DAC disposed on the substrate having an input coupled to an output of the AFT circuit; a low pass filter disposed on the substrate having an input coupled to a second output of the VIF demodulator and Nyquist filter; a sync detection and AGC circuit disposed on the substrate having an input coupled to an output of the low pass filter; a digital VGA disposed on the substrate having an input coupled to the second output of the VIF demodulator and Nyquist filter and a control signal input coupled to an output of the sync detection and AGC circuit; a third digital to analog converter disposed on the substrate having an input coupled to an output of the digital VGA; a band pass filter disposed on the substrate having an input coupled to the second output of the VIF demodulator and Nyquist filter; and a FM demodulator disposed on the substrate having an input coupled to an output of the band pass filter; and a fourth DAC disposed on the substrate having an input coupled to an output of the FM demodulator”. The closest prior art, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

Claims 4-10 are directed to a method of converting a received analog IF modulated signal into a plurality of analog signals. The independent claim 4 identifies the distinct features: “VIF demodulating and Nyquist filtering the input digital signal into a first digital filtered signal, a second digital filtered signal, a third digital filtered signal, and a fourth digital filtered signal; digitally converting the first digital filtered signal to a

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first analog output signal; digitally converting the second digital filtered signal to a low pass filtered digital signal; digitally converting the third digital filtered signal to a band pass filtered digital signal; digitally converting the fourth digital filtered signal to a high pass filtered digital signal; digitally converting the lowpass filtered digital signal to a second analog output signal; digitally converting the bandpass filtered digital signal to a third analog output signal; and digitally converting the highpass filtered digital signal to a fourth analog output signal". The closest prior art, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shadwell et al. (US Patent No. 6,542,203 B1) disclose digital receiver for receiving and demodulating a plurality of digital signals and method thereof.

Sakamoto (US Patent No. 4,623,926) discloses television synchronous receiver.

Steckler et al. (US Patent No. 4,502,078) disclose digital television receivers.

Patel et al. (US Patent No. 6,545,728 B1) disclose digital television receivers that digitize final I-F signals resulting from triple conversion.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Trang U. Tran** whose telephone number is **(703) 305-0090**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W. Miller**, can be reached at **(703) 305-4795**.

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**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

TT TT  
July 25, 2003

  
MICHAEL H. LEE  
PRIMARY EXAMINER